in cases with an unfavorable prognosis; while in cases showing improvement it tends to diminish in favor of a neutrophilic, and, frequently, eosinophilic increase. During states of excitement the blood picture is as in the acute cases. In most cases the coagulation time is slightly hastened. Itten thinks that the lymphocytosis, and frequent eosinophilia, are perhaps due to some perversion of the internal secretions, especially since it is not infrequent to see symptoms suggestive of a status thymico-lymphaticus. In cases of epilepsy the white blood count is low in the intervals, and tends to increase shortly before and after the attacks. Before, and during the attack, there is a lymphocytosis followed by a leukocytosis of the neutrophile type, a point of considerable diagnostic value since hysterical and paralytic seizures are not associated with a primary lymphocytosis. The coagulation time was always shortened, particularly before and immediately after the attacks.

The Cerebrospinal Pressure.—The present study was undertaken by DIXON and HALLIBURTON (*Jour. Physiol.*, 1914, xlviii, 128), with the object of examining the pressure of the cerebrospinal fluid under various experimental conditions. Tests were made of the validity of the Monro-Kellie doctrine which assumes that since the brain, its vessels and lymphatics are enclosed in a bony case, and that the brain occupies the whole skull and is incompressible, that therefore the total blood content is almost constant. On this assumption the brain can increase its blood content only by turning out the cerebrospinal fluid, and when this fluid has gone the brain comes in contact with the skull so that no further expansion of the vessels can occur. Using suitable manometers Dixon and Halliburton noted the affect of the various changes in the arterial and venous blood-pressure upon that of the spinal fluid. After hemorrhage a fall in the spinal pressure was noted, which they regard as a passive result of the altered vesicular conditions. Following the compression of the bloodvessels, particularly of the aorta, a rise in pressure was noted, which was also thought to be due to altered vesicular conditions which prevent the free absorption or facilitate the secretion of fluid. This fact may be brought into connection with the rise in spinal pressure which is observed clinically under conditions of sudden rise in blood-pressure such as may occur during an acute nephritis. After stimulation of the vagus and sympathetic nerves, various results were noted depending probably upon the affect of stimulation upon blood pressure itself. By experiment Dixon and Halliburton could show that alterations in the cerebrospinal pressure exert a marked passive action on the cerebrovenous pressure. Dixon and Halliburton studied the affect on the cerebrospinal pressure of substances which increase the cerebrospinal fluid secretion, namely: choroid extract which produces an increase in pressure due to a specific increased secretion of fluid; anesthetics and hypnotics; and finally carbon dioxid. Other drugs were used by reason of their ability to produce vesicular changes which would manifest themselves upon the cerebrospinal pressure, namely, adrenalin, a vasoconstrictor; amyl nitrite, a vasodilator; and pilocarpin. Adrenalin appears to affect the cerebrospinal fluid only indirectly through the vesicular system. The increased cerebrospinal pressure tends to fall more rapidly than the blood-pressure. Following the administration of amyl nitrite a rise in spinal pressure is noted. As the result of investigation Dixon and Halliburton conclude that the cranial contents cannot any longer be regarded as a fixed quantity without the power of expanding or contracting in volume. The cerebrospinal pressure is influenced passively to a small extent by changes in the arterial and venous pressures, but these are insignificant compared with the independent changes in pressure which occur as the result of secretory activity. Of all the conditions which influence the secretion of the spinal fluid Dixon and Halliburton are inclined to attach the most importance to a deficiency of oxygen or an excess of carbon dioxid in the blood.

Blood Findings in Epilepsy.—FACKENHEIM (*Congress for Internal Medicine at Wiesbaden*, 1914) has made systematic blood examinations over a period of two years upon 100 epileptics of the chronic progressive type, and has found these results: 67 per cent. showed a reduction of hemoglobin to between 50 and 60 per cent.; 31 per cent. showed an anemia of 60 to 70 per cent., and only two cases had a hemoglobin of over 85. Apparently the reduction in hemaglobin stands in direct relation to the epileptic attacks, that is, shortly before the attacks the reduction of the hemoglobin was greatest, while in the intervals the hemoglobin tends to approach a constant level in the separate cases. The number of white-blood cells was considerably increased shortly before an attack and markedly increased afterward in 78 per cent., the mononuclear cells of the large type showing an especial increase. In every case there was an increase in the rapidity of the coagulation time averaging between two and three minutes. The coagulation time was most rapid in the period of about ten hours preceding an attack. In the beginning of a status epilepticus, blood coagulation may take place in fifteen seconds, in another case it occurred in twenty-four seconds, and then become decreased over a period of about two days following the attack. Fackenheim discourses somewhat upon the varying relationship of the reflexes to the attacks as well as disturbances in metabolism and believes that the cause of the phenomena of epilepsy is to be found in disorders of the internal secretions.

Lipemia.—SAKAI (*Biochem Zeitschr.*, 1914, lxii, 387) was able to show that lipemia cannot be produced by feeding fats to normal dogs, because they leave the blood as rapidly as they enter it from the intestines. It can be induced, however, in dogs which have been made anemic by venesection, or poisoned by phenylhydrazin hydrochloride. It occurs when the hemoglobin reaches between 20 and 30 per cent., and is most pronounced in animals which were in a good state of nourishment when the experiments were commenced. Lipemia, caused by giving a diet poor in fats, and associated with a rapid loss in weight, is increased by the administration of milk. Since in some anemic animals a strong lipemia occurs after the use of palmin, whereas this does not occur in the normal, one must assume that in the former case fats leave the blood more slowly than normal. Suitable chemical analyses gave fat values up to 5 per cent. in the blood serum, and the cholesterin content was likewise increased, though to a less degree. This increase is probably explained on the basis of its ready solubility in fats. One